

# CERES Data Management Status

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Presented to  
CERES Science Team

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# CERES Data Management Status

## Agenda

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- Science Data Product Status
- Processing Environment Status
- Technology Advances

# CERES Science Data Source Status

<b>Data</b>	<b>Satellite</b>	<b>Source</b>	<b>Status</b>	<b>Comments</b>
L0 Data	TRMM	Instrument Data Stream	Complete	
L0 Data	Terra-CERES	Instrument Data Stream	Incoming	100% for April by 05/02
L0 Data	Aqua-CERES	Instrument Data Stream	Incoming	100% for April by 05/02
Attitude	TRMM	Spacecraft	Incoming	100% for April by 05/02
Attitude	Terra	EDOS-EMOS-FDS-LDAAC-LaTIS	Incoming	100% for April by 05/02
Attitude	Aqua	EDOS-LaTIS	Incoming	100% for April by 05/02
Ephemeris	TRMM	Spacecraft	Incoming	100% for April by 05/02
Ephemeris	Terra	EDOS-LDAAC-LaTIS	Incoming	100% for April by 05/02
Ephemeris	Aqua	EDOS-LaTIS	Incoming	100% for April by 05/02
Imager	TRMM-VIRS	Instrument	Incoming	
Imager	Terra - MODIS	GDAAC	Incoming	
Imager	Aqua - MODIS	GDAAC	Incoming	
MOA		DAO	Incoming	Quality improving, but not yet adequate for CERES use. New version of GEOS-4 in testing.
MOA		ECMWF	Incoming	Continue at least through Sep, 2003
MOA		GHRC $\mu$ wave humidity	Incoming	

# CERES Science Data Products

## Delivered Since September 2002 (Part 1)

Data Set	Comments
CER_SRBAVG_TRMM-PFM-VIRS_Edition2B	<ul style="list-style-type: none"> <li>•All 9 months</li> <li>•Final TRMM data set until major reprocessing</li> </ul>
CER_CRS_TRMM-PFM-VIRS_Edition2C	<ul style="list-style-type: none"> <li>•Surface fluxes included in product</li> <li>•All 9 months reprocessed</li> <li>•Final TRMM data set until major reprocessing</li> </ul>
CER_CRS_TRMM-PFM-VIRS_Edition2C-TransOps	<ul style="list-style-type: none"> <li>•Jan-Jul'99</li> <li>•Transient operations data (not continuous)</li> <li>•Not currently available to public</li> </ul>
CER_FSW_TRMM-PFM-VIRS_Edition2C	All 9 months of TRMM data
CER_BDS_Terra-FMx_Edition2 CER_ES8_Terra-FMx_Edition2 CER_ES4_Terra-FMx_Edition2 CER_ES9_Terra-FMx_Edition2	<ul style="list-style-type: none"> <li>•Final TRMM data set until major reprocessing</li> <li>•Available 3/2000 through 12/2002</li> <li>•Early 2003 data should become available this summer</li> </ul>
CER_ES4_FM1+FM2_Edition2 CER_ES9_FM1+FM2_Edition2	<ul style="list-style-type: none"> <li>•Available 3/2000 through 12/2002</li> <li>•Production of these data sets has been halted.                –Replaced by FM1+FM2+FM3+FM4 (Edition1)</li> </ul>
CER_SSF_Terra-FMx-MODIS_Edition1A	<ul style="list-style-type: none"> <li>•Available 3/2000 through 1/02 (except 9/00 &amp; 10/00)                –will process through 10/02</li> <li>•V003 MODIS, Edition2 IES data are input</li> <li>•TRMM ADMs</li> </ul>

# CERES Science Data Products

## Delivered Since September 2002 (Part 2)

Data Set	Comments
CER_SFC_Terra-FMx-MODIS_Beta1	<ul style="list-style-type: none"> <li>• Available 3/2000 through 1/02 (except 8/00 - 10/00)                – Will process through 10/02</li> <li>• Edition1A SSFs are input</li> </ul>
CER_SRBAVG_Terra-FMx-MODIS_Beta1	<ul style="list-style-type: none"> <li>• Months available: 3/00, 1/01, 4/01                – To be replaced with Beta2 using newest GGEO data set shortly                – Beta1 SFC and ValR7 GGEO were inputs</li> </ul>
CER_CRS_Terra-FMx-MODIS_Beta3	<ul style="list-style-type: none"> <li>• Science Team only</li> <li>• Months available: 1/01, 4/01, 7/01</li> </ul>
CER_FSW_Terra-FMx-MODIS_Beta3	<ul style="list-style-type: none"> <li>• Terra Beta3 CRS is input</li> <li>• Months available: 1/01, 4/01, 7/01</li> </ul>
CER_BDS_Aqua-FMx_Baseline1 CER_BDS_Aqua-FM3_Beta2 CER_BDS_Aqua-FM4_Edition1	<ul style="list-style-type: none"> <li>• Months available: 6/18/02 - 3/31/03</li> <li>• Baseline1 not for public release</li> </ul>
CER_ES8_Aqua-FM3_Beta2 CER_ES8_Aqua-FMx_Baseline1	<ul style="list-style-type: none"> <li>• Months available: 6/18/02 - 3/31/03</li> <li>• Baseline1 not for public release</li> </ul>
CER_ES4_Aqua-FM3_Beta2 CER_ES9_Aqua-FM3_Beta2 CER_ES4_Aqua-FMx_Baseline1 CER_ES9_Aqua-FMx_Baseline1	<ul style="list-style-type: none"> <li>• Months available: 7/02 - 3/03</li> <li>• Baseline1 not for public release</li> </ul>

# CERES Science Data Products Delivered Since September 2002 (Part 3)

Data Set	Comments
CER_ES4_Aqua-FM3+FM4_Baseline1 CER_ES9_FM3+FM4_Baseline1	<ul style="list-style-type: none"><li>•months available: 7/02 - 3/03</li><li>•further processing has been halted</li><li>•Baseline1 not for public release</li></ul>
CER_SSF_Aqua-FM4-MODIS_Beta1	<ul style="list-style-type: none"><li>•Available: 9/02, 10/02</li><li>•Still processing 1/03</li><li>•First SSF data set for Aqua</li></ul>

# CERES Science Data Products

Expected to be Released Before Next Science Team Meeting(1)

Data Set	Comments	When?
CER_SYN_TRMM-PFM-VIRS_Beta1 CER_AVG_TRMM-PFM-VIRS_Beta1 CER_ZAVG_TRMM-PFM-VIRS_Beta1	<ul style="list-style-type: none"> <li>• First Synoptic SARB and TISA averaged data sets</li> <li>• For data months 4/98, 7/98, 8/98</li> </ul>	Expected to start processing in June/July'03
CER_SSF_Terra-FMx-MODIS_Edition1B	<ul style="list-style-type: none"> <li>•For Nov'02 through present data</li> <li>•Uses MODIS V004 inputs</li> </ul>	Expected to start processing in July'03
CER_SSF_Terra-FMx-MODIS_Beta5	<ul style="list-style-type: none"> <li>•Using Terra Edition1A SSF as input</li> <li>•Apply 1st cut Terra ADMs</li> </ul>	Expected to start processing in August'03.
CER_SRBAVG_Terra-FMx-MODIS_Beta2	<ul style="list-style-type: none"> <li>•For 2001 data</li> <li>– Edition1A SSF -&gt; Beta1 SFC are input</li> </ul>	Expected to start processing in May'03.
CER_SYN_Terra-FMx-MODIS_Beta1 CER_AVG_Terra-FMx-MODIS_Beta1 CER_ZAVG_Terra-FMx-MODIS_Beta1	<ul style="list-style-type: none"> <li>•First Synoptic SARB and TISA averaged data sets for Terra</li> <li>–Beta3 FSW is input</li> <li>•3 data months 1/01, 4/01, 7/01</li> </ul>	Expected to start processing in June/July'03.
CER_CRS_Terra-FMx-MODIS_Beta4	<ul style="list-style-type: none"> <li>•Edition1A SSF remains input</li> <li>•Improved SARB algorithms</li> <li>•Process all 2001 data</li> </ul>	Expected to start processing in July'03
CER_FSW_Terra-FMx-MODIS_Beta4	<ul style="list-style-type: none"> <li>•Follows SARB processing</li> <li>•Process all 2001 data</li> </ul>	Expected to start processing in July'03

# CERES Science Data Products

Expected to be Released Before Next Science Team Meeting (2)

Data Set	Comments	When?
CER_BDS_Aqua-FM3_Edition1	<ul style="list-style-type: none"> <li>• First validated Aqua data set for FM3</li> <li>• 6/18/02 - present</li> </ul>	Expected to start
CER_ES8_Aqua-FMx_Edition1, CER_ES4_Aqua-FMx_Edition1, CER_ES9_Aqua-FMx_Edition1	<ul style="list-style-type: none"> <li>• 1st validated ERBELike Aqua data set</li> <li>• 6/18/02 - present</li> </ul>	<del>processing in May'03</del> Expected to start processing in May'03
CER_SSF_Aqua-FMx-MODIS_Beta2	<ul style="list-style-type: none"> <li>• Second cut at Aqua processing</li> <li>• Process 3-5 months of data</li> <li>• Aqua Edition1 IES is input</li> </ul>	Expected to start processing in August'03.
CER_SFC_Aqua-FM4-MODIS_Beta1	<ul style="list-style-type: none"> <li>• First averaged Aqua data set</li> <li>• 9/02 and 10/02 only</li> <li>• Aqua-FM4 Beta1 SFC is input</li> </ul>	Expected to start processing in May'03.
CER_CRS_Aqua-FM4-MODIS_Beta1	<ul style="list-style-type: none"> <li>• First Aqua SARB data set</li> <li>• 9/02, 10/02, 1/03 only</li> <li>• Aqua-FM4 Beta1 SSF is input</li> </ul>	Expected to start processing in July'03.
CER_FSW_Aqua-FM4-MODIS_Beta1	<ul style="list-style-type: none"> <li>• First Aqua FSW data set</li> <li>• 9/02, 10/02 only</li> <li>• Aqua-FM4 Beta1 CRS is input</li> </ul>	Expected to start processing in August'03
CER_SYN_Aqua-FM4-MODIS_Beta1 CER_AVG_Aqua-FM4-MODIS_Beta1 CER_ZAVG_Aqua-FM4-MODIS_Beta1	<ul style="list-style-type: none"> <li>• 9/02, 10/02 only</li> <li>• Aqua-FM4 Beta1 FSW is input</li> </ul>	Expected to start processing in August'03

# Older CERES Science Data Products

## Still of Interest

Data Set	Comments
CER_BDS_TRMM-PFM_Edition1	
CER_BDS_TRMM-PFM_Transient-Ops2	Not Publicly released
CER_ES8_TRMM-PFM_Edition2	
CER_ES8_TRMM-PFM_Transient-Ops2	
CER_ES4_TRMM-PFM_Edition2 CER_ES9_TRMM-PFM_Edition2 CER_ES4_PFM+FM1+FM2_Edition2 CER_ES9_PFM+FM1+FM2_Edition2 CER_ES4_PFM+FM1_Edition2, CER_ES9_PFM+FM1_Edition2 CER_ES4_PFM+FM2_Edition2, CER_ES9_PFM+FM2_Edition2	
CER_SSF_TRMM-PFM-VIRS_Edition2B	
CER_SSF_TRMM-PFM-VIRS_Edition2B-TransOps	
CER_SSF_TRMM-SIM-VIRS_Edition2-VIRSonly	

# Science Data Product URLs and Contacts

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- Ordering Data
  - [http://eosweb.larc.nasa.gov/HBDOCS/langley\\_web\\_tool.html](http://eosweb.larc.nasa.gov/HBDOCS/langley_web_tool.html)
- Contact Points
  - All questions regarding production data products and their use
    - E-mail: [larc@eos.nasa.gov](mailto:larc@eos.nasa.gov)
    - Langley ASDC Customer Service
  - Contents of this presentation: [m.m.little@larc.nasa.gov](mailto:m.m.little@larc.nasa.gov)
- CERES News (e-mail)
  - Subscribe from CERES datasets webpage
  - All new public datasets are announced as soon as available

# SCF Configuration and Planning

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- Objectives and capabilities: Reduce cost to operate
  - Provide environment for development & testing of science codes
  - Provide computing capacity for unscheduled requirements
- Planned Improvements: Improve support and reduce operations costs
  - Replace SGI Origin 2000 with Origin 3800
    - 64 processors split with CALIPSO and Icing Projects
    - Move to more validation and special case processing at SCF
      - All public release continues to be done at ASDC
  - Increase disk and tape space availability
    - Staging of data from ASDC for processing
    - Backup vs. archive
  - Modernize workstations for developers and scientists
    - Mac OS X: McIDAS, view\_hdf
- ITS Issues
  - SysAdmin Certification

# Planned Work to Improve Products

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- ERBE Digital Library Experiment
  - Preserve non-observational data (engineering, minutes, etc.) along with observational data to assist future interpretation and re-use
  - Kathy Bush lead initial experiment
  - Michele Ferebee to discuss on Thursday
- Software Conversion to Open Source (LINUX)
  - Permit Easier Use in non-SGI environment
    - Use lower cost processors for production
  - Code validation to prove same results
    - Identify potential errors introduced by code compilation for future users
  - Included in Proposal for Phase II
    - Saves processing costs at ASDC
- Check Production Data Products for Completeness
  - Ensure all data approved for public release is available
- Improve Product Analysis through Visualization
  - Easier, faster analysis
  - Visualization of parameters directly from data sets